

Revision on decimals and fractions

Level 1

1. Calculate the following:

$$\begin{aligned} \text{a. } \frac{1}{6} + \frac{3}{6} - \frac{2}{6} & \text{ or } \\ = \frac{4}{6} - \frac{2}{6} & \\ = \frac{2}{6} & \\ = \frac{1}{3} & \end{aligned}$$

$$\begin{aligned} & \text{or } \\ & = \frac{1+3-2}{6} \\ & = \frac{2}{6} \\ & = \frac{1}{3} \end{aligned}$$

$$\text{b. } 4.2 \times 5.9$$

$$= 24.78$$

$$\begin{array}{r} 4.2 \\ \times 5.9 \\ \hline 2100 \\ 3780 \\ \hline 24.78 \end{array}$$

$$\text{c. } \frac{1}{12} \div \frac{3}{12}$$

$$\begin{aligned} & = \frac{1}{12} \times \frac{12}{3} \\ & = \frac{1}{3} \end{aligned}$$

2. Write the following as fractions in their simplest form:

$$\text{a. } 0.786$$

$$\begin{aligned} & = \frac{786}{1000} \\ & = \frac{393}{500} \end{aligned}$$

$$\text{b. } 6.8$$

$$\begin{aligned} & = 6\frac{8}{10} \\ & = 6\frac{4}{5} \end{aligned}$$

$$\text{c. } 403.24$$

$$\begin{aligned} & = 403\frac{24}{100} \\ & = 403\frac{6}{25} \end{aligned}$$

3. Convert the following fractions to decimals:

$$\text{a. } \frac{45}{100}$$

$$= 0.45$$

$$\text{b. } \frac{7}{5}$$

$$\begin{aligned} & = 7 \div 5 \\ & = 1.4 \end{aligned}$$

$$\begin{aligned} & \text{or } \frac{1 \times 2}{5 \times 2} = \frac{2}{10} \\ & = 1\frac{4}{10} = 1.4 \end{aligned}$$

$$\text{c. } 6\frac{3}{8}$$

$$\begin{aligned} & = 6\frac{3 \times 125}{8 \times 125} = 6 + (3 \div 8) \\ & = 6\frac{375}{1000} = 6 + 0.375 \\ & = 6.375 \end{aligned}$$

Level 2

4. Change $\frac{2}{11}$ into a recurring decimal. (4)

$$\begin{aligned} & \frac{2}{11} \\ & = 0.1818 \dots = 0.\overline{18} / 0.\dot{1}8 \end{aligned}$$

$$\begin{array}{r} 0.1818 \dots \\ 11 \overline{) 2.0} \\ \underline{11} \\ 90 \\ \underline{88} \\ 20 \\ \underline{11} \\ 90 \\ \underline{88} \\ 2 \end{array}$$

$$\begin{array}{r} 2.03 \\ 36 \overline{) 73.08} \\ \underline{72} \\ 108 \\ \underline{108} \\ 0 \end{array}$$

$$\text{5. } 7.308 \div 3.6$$

$$\begin{aligned} & = 73.08 \div 36 \\ & = 2.03 \end{aligned}$$

6. Arrange the following in ascending order:

$$\text{(4)} \quad 0.45 = 0.45 \quad \text{(2)} \quad \frac{43}{100} = 0.43 \quad \text{(2)} \quad \frac{1}{5} = 0.2 \quad \text{(5)} \quad 4.5 = 4.5 \quad \text{(1)} \quad \frac{43}{1000} = 0.043$$

$$\text{or } \frac{45}{100} \quad \frac{43}{100} \quad \frac{20}{100} \quad \frac{450}{100} \quad \frac{43}{100}$$

$$\frac{43}{1000} < \frac{1}{5} < \frac{43}{100} < 0.45 < 4.5$$

Level 3: Word problems

7. How many 7 kg bags of potatoes can be filled from a bag of potatoes weighing 89.3kg?
How many kg of potatoes have left over?

$$89.3 \div 7$$

$$= 12 \text{ --- } 5.3$$

$$\begin{array}{r} 12.0 \\ 7 \overline{) 89.3} \\ \underline{7} \\ 19 \\ \underline{14} \\ 5.3 \end{array}$$

12 bags of potatoes can be filled
and 5.3 kg of potatoes have left over.

8. Peter saved \$24,000 last year. He used $\frac{1}{6}$ of the amount for food and $\frac{1}{3}$ of the remainder to buy a new television. How much did Peter have left?

Money Peter remained after paid for food:

$$24000 - 24000 \times \frac{1}{6}$$

$$= 24000 - 4000$$

$$= 20000 \text{ dollars}$$

Peter have left:

$$20000 - 20000 \times \frac{1}{3}$$

$$= 20000 - 6666 \frac{2}{3}$$

$$= 13333 \frac{1}{3} \text{ dollars}$$

$$\begin{array}{r} 6666 \\ 3 \overline{) 20000} \\ \underline{18} \\ 2000 \\ \underline{18} \\ 200 \\ \underline{18} \\ 20 \end{array}$$

or.

$$24000 \times (1 - \frac{1}{6}) \times (1 - \frac{1}{3})$$

$$= 24000 \times (\frac{5}{6}) \times (\frac{2}{3})$$

$$= \frac{40000}{3}$$

$$= 13333 \frac{1}{3}$$

Peter have \$ 13333 $\frac{1}{3}$ left
or (\$ 13333.3)

9. A bag of salt that weighs $6\frac{2}{3}$ kg is shared among 10 boys. Each boy divides the salt he gets into portions of 0.6 kg. How many portions of salt does each boy get? (Hint: use fraction as answer)

$$6\frac{2}{3} \div 10 \div 0.6$$

$$= \frac{20}{3} \times \frac{1}{10} \times \frac{10}{6}$$

$$= \frac{10}{9}$$

$$= 1\frac{1}{9}$$

or

$$6\frac{2}{3} \div 10$$

$$= \frac{20}{3} \times \frac{1}{10}$$

$$= \frac{2}{3} \text{ kg}$$

Each boy get $\frac{2}{3}$ kg of salt

Each boy get $1\frac{1}{9}$ portions of salt.

$$\frac{2}{3} \div 0.6$$

$$= \frac{2}{3} \times \frac{10}{6}$$

$$= \frac{10}{9} = 1\frac{1}{9}$$

Each boy get $1\frac{1}{9}$ portion of salt.